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File Code: 3420 **Date:** May 10, 2005
Route To:

Subject: Two-Year Follow-up on Paliza Campgrounds Bark Beetle Prevention Project

To: District Ranger, Jemez Ranger District, Santa Fe NF

On May 3, 2005, Terry Rogers and I revisited the Paliza Group and Family Campgrounds to document the condition of trees ground-sprayed in 2003 and to observe the outcome of thinning activities conducted in 2003 and 2004 to promote stand vigor.

This evaluation concludes our monitoring of the carbaryl preventive spray treatment as the longevity of protection was expected to be a minimum of one year and a maximum of two years. The application of 2% carbaryl liquid was applied to the bark of 53 ponderosa pines and 2 piñons March 26-30, 2003 (reference 3420 post-treatment evaluation letter of 12/22/2003 for details). Both campgrounds have been undergoing complete reconstruction and so have been closed to the public for the past 2 years. Since the 12/22/2003 evaluation when seven of the sprayed and tagged trees could not be found, an additional nine trees are now also missing. At the time the candidates for protective spraying were selected, little ground marking for road re-alignment and facility demolition and construction was evident. While the loss of sprayed trees to construction activities is disappointing, the magnitude of the changes which have taken place on the ground now makes the conservation of the surviving sprayed trees rather remarkable. No additional sprayed trees have been lost in the Paliza Family Campground since just one was recorded as missing in 2003. The Paliza Group site has not fared quite as well, with some 15 trees now unaccounted for. This corresponds to a loss of about 28% of the trees sprayed in the Group site, but this was also the location of the majority of sprayed trees. An unfortunate incident with fire has burned one side of one of the sprayed trees (tag #718) and time will tell if the amount of cambium damage is lethal. A two-page attachment includes tree sanitation removal data, some photos of the site, and the results of our observations of sprayed trees.

On another note, the trees that were felled in the stream in the Family Campground and were heavily attacked by ips beetles in the spring of 2004 were either removed from the site or had one or two faces debarked with a log wizard. The mitigation appears to have been successful as there are no signs of bark beetle attack on trees in the riparian area.

Efficacy of the treatment is difficult to measure as, luckily, few unsprayed trees have died. A few piñons in the Group site were lost to bark beetles in 2004 and one 9-inch ponderosa in the Family site appears to have been recently killed by ips beetles. The combination of sanitation removal of infested trees in late 2002, the spraying of selected trees, and the subsequent thinning appears to have met our objectives in giving these sites the best chance of resisting additional attacks. The troubling sight of nearly 300 bark beetle-killed trees in the Group Campground in 2002 has been replaced with new facilities in an attractively open forest setting.

Our plan to manage bark beetle activity in these campgrounds appears to have been successful. Given the importance of the residual stand in maintaining shade and a pleasant aesthetic in a site receiving a large capital investment, the expense of applying a protective spray to 55 trees appears to have been worthwhile. All sprayed trees which survived construction activities are bark beetle-free. The objective of the spraying was to protect these trees in the interim prior to completion of the vigor-enhancing thinning. Should additional thinning be desirable, we recommend the same precaution used throughout this project; that is, removal of fresh pine logs or limbs four inches or greater in diameter to prevent ips bark beetle brood development.

Please don't hesitate to contact us should you have questions or require additional field assistance.

/s/ Debra Allen-Reid
DEBRA ALLEN-REID
New Mexico Zone Leader, Forest Health

Enclosure

cc: Dave Cummings, Joan Hellen, Terry J Rogers, Leonard Lucero, Douglas L Parker, John Anhold

SANTA FE NATIONAL FOREST
JEMEZ RANGER DISTRICT--PALIZA CAMPGROUNDS
CUT TREE TABULATION FOR
BEETLE KILL REMOVED DURING LATE 2002 AND EARLY 2003

PONDEROSA PINE SPECIES – Diameter Range and Quantity:

4”	6”	8”	10”	12”	14”	16”	18”	20”	22”	24”
72	80	43	42	19	13	12	8	3	1	4

Paliza Group Campground in the summer of 2002 (left) and May 3, 2005 (right).

Dead *Ips* beetle in debarked ponderosa log.

Round metal tag (718) on scorched sprayed tree.

SANTA FE NATIONAL FORESTFOREST HEALTH PROJECT - SPRAY TREES
JEMEZ RANGER DISTRICT-- PALIZA CAMPGROUNDS

STATUS COLUMN: NF= not found; G= green, apparently healthy; F= fire-damaged)

Paliza Group **Paliza Family**

Owl Loop B **Falcon Loop A**

Tag #	Size	Species	Status 5/3/2005	Tag #	Size	Species	Status 5/3/2005	Tag #	Size	Species	Status 5/3/2005
768	26”	PP	NF	756	20”	PP	G	739	18”	PP	G
767	24”	PP	NF[1]	755	21”	PP	G	738	16”	PP	G
766	20”	PP	G	754	22”	PP	G	737	15”	PP	NF
765	20”	PP	G	753	16”	PP	G	736	24”	PP	G
764	18”	PP	G	752	14”	PP	NF	735	24”	PP	G
763	14”	Piñon	G	751	14”	Piñon	G	734	6”	PP	G
762	20”	PP	NF	750	28”	PP	G				
761	23”	PP	G	749	13”	PP	NF				
760	26”	PP	G								
759	24”	PP	NF								
758	12”	PP	G								
757	17”	PP	G								
748	11”	PP	G								
747	14”	PP	NF								
746	18”	PP	G								
745	9”	PP	NF								
744	11”	PP	G								
743	12”	PP	NF								
742	12”	PP	G								
741	11”	PP	NF								
740	9”	PP	G								
733	9”	PP	G								
732	17”	PP	G								
731	14”	PP	G								
730	10”	PP	G								
729	15”	PP	G								
728	14”	PP	G								
727	29”	PP	G								
726	11”	PP	G								
725	17”	PP	G								
724	4”	PP	NF								
723	11”	PP	G								
722	6”	PP	G								
721	19”	PP	G								
720	17”	PP	NF								
719	16”	PP	G								
718	18”	PP	G								
717	11”	PP	NF								
716	19”	PP	G								
715	17”	PP	NF[2]								
714	11”	PP	NF								

[1]We removed this tag from a 14” dbh tree where it had been erroneously moved by an unknown person.
[2] We removed this tag from a 10”dbh tree where it had been erroneously moved by an unknown person.